U.S. Department
of Transportation
Federal Aviation Administration

Measuring the Regional Economic Significance of Airports

Office of Airport Planning and Programming
Washington, D.C. 20591

DOT/FAA/PP/87-1 October 1986

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This report provides advice on how to measure the importance of an airport to the economy of the surrounding area. It defines various measures of economic significance , describes the circumstances in which they are applicable, and provides guidelines for their initial approximation and subsequent computation.

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Analysts should consider the intended application of their work and its probable audience and design their analysis accordingly. Preliminary calculations derived from rules of thumb provide "ball-park" measures of an airport's significance and are appropriate only when quick-response information is required and precision is not essential. More detailed analytical techniques, which require more time and money to perform, are appropriate when a more precise estimate is needed. Detailed analyses may be used to support major investment decisions or as input into debates of a technical nature. A balance should be maintained between the effort in preparing an analysis and the effort in disseminating the results.

The following sections provide guidance on both simple rules of thumb and more sophisticated analytical techniques. Chapter 2 presents a methodology for the development of measures of transportation benefit. Chapter 3 offers suggestions for estimating economic impacts by means of (a) some statistical rules of thumb and (b) a comprehensive economic assessment. A brief summary is presented in Chapter 4.

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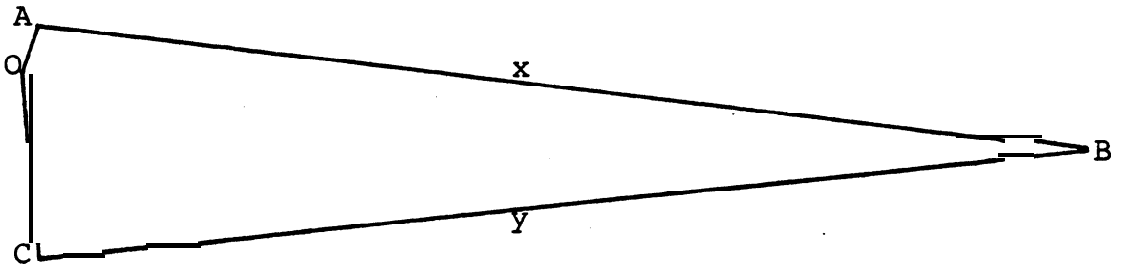
by the value of the passengers ' time. There is also a benefit as a result of reduced ground travel costs, since airport A is closer to the origin of trips than airport C. There could be additional benefits if the flight distance x were shorter than the alternative flight distance y. In the examples below, it is assumed for the sake of simplicity that the flight distances are equal.

FIGURE 2-1
TRANSPORTATION BENEFIT OF AN AIRPORT



The variables that must be considered in the analysis are listed in Table 2-1. Most of them do not have to be determined for each analysis; typical values can be used instead. The critical variables that must be determined for each individual analysis are the number of based aircraft, the number of passengers in commercial air service, and the access distances to the airports at A and C. The -total benefit is the sum of the time saving and travel cost reduction. The equations are shown separately and in the combined format. A more detailed analysis that considers the cost of aircraft flight time may be warranted if the distance x is substantially different from the distance y (See reference 6)..

Time Saved

Annual Passengers =	FGN + Y
O-C-B time =	b/P + y/S
O-A-B time =	d/P + x/S
Annual Benefit =	E(FGN + Y)(b/P + y/S - x/S -d/P)

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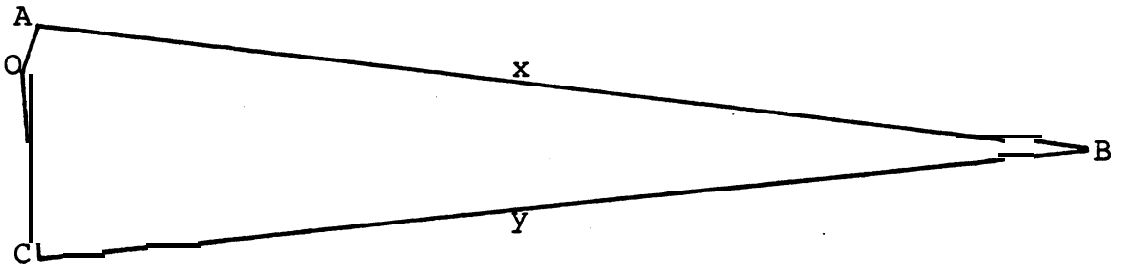

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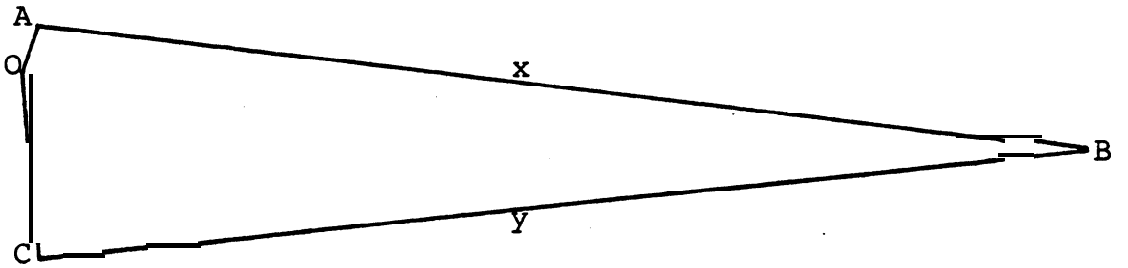

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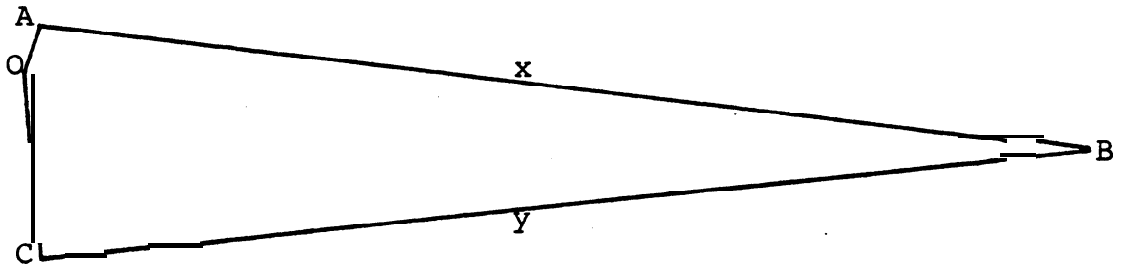

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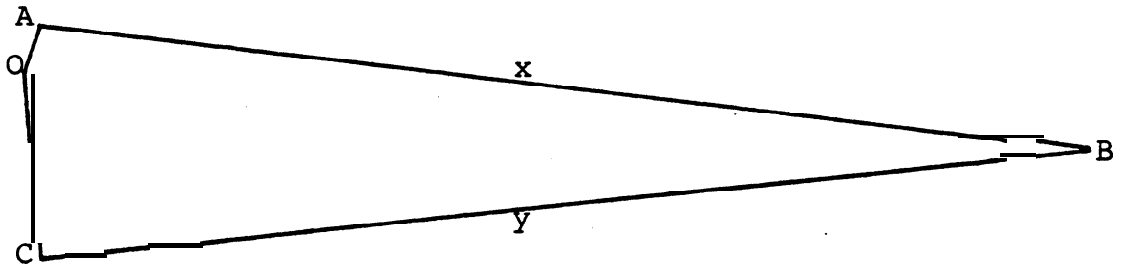

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For example, an airport being studied has 25 based aircraft, and a regional airline served 6,000 passengers at the airport in the preceding year. The nearest alternative airport is 20 highway miles farther from the area served by the airport under study. The total annual transportation benefit from the airport is 25 aircraft times $9,773 per aircraft plus 6,000 passengers times $15.91 per passenger, or $339,785.

2.4 Effect of Increased Activity

An analysis can be used to determine the additional benefits that will result from increased activity at an airport. The increased activity may be the result of gradual growth in the demand for air transportation (passenger enplanements in the U.S. are forecast to increase at a rate of 4.5 percent per year), or it may occur rapidly as the result of an improvement to the airport or the introduction of new service. When the expected number of additional based aircraft and commercial passengers is known, the analytical technique or rule of thumb described in the preceding sections can be used to estimate the increased benefit. This information may be used to evaluate proposals to improve an airport or restrict airport growth.

2.5 Reduced Delays

A general aviation airport in a metropolitan area may be designated a reliever airport by the Federal Aviation Administration. In addition to providing access to the surrounding area, the airport relieves congestion at a busy airline airport by providing general aviation aircraft with an attractive alternative landing area. For instance, Teterboro Airport in New Jersey is a reliever for Newark Airport, serving over 400 aircraft that might otherwise land at Newark and add to congestion there.

The value of delay reduction resulting from a reliever airport can be computed by estimating the amount of traffic that would

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While it is usually not possible to predict such uses or to express them in dollars, they can be illustrated by references to specific instances in which the local airport, or one in the general area, was used in an emergency. Anecdotal evidence and summaries of case studies can add a new dimension to discussions of airport benefits.

2.7 Stimulation of Business

Aviation is an essential form of business transportation, and it has helped to shape the size and structure of many major corporations. The presence of an airport and the type of services it provides are important considerations in the siting of business and industrial facilities. Large airports are magnets for warehousing, distribution centers, office parks, hotels, and other development. Smaller airports help to attract industry to small- and medium-sized communities, though they must work in concert with other factors such as the availability of a market, raw materials, labor/utilities, favorable treatment by local government, low taxes, community amenities, and sites that are economical to develop. As an important part of a rural area's transportation network, an airport is a factor in fostering business.

2.8 Access to the National Airport System

State and local agencies, working with the Federal government, have provided the United States with the world's most extensive and best equipped airport system. These airports accommodate about 40 percent of the commercial traffic in the world, and 60 percent of the general aviation traffic. It is through the local airport that an area gains access to this important national resource.

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As a practical matter, however, it will rarely be cost effective to develop a base-case scenario that depicts the economy of the region without the airport. The time and resources required for this exercise will seldom warrant the resulting improvement in the estimates of employment, -payroll, and expenditure impacts.

Expenditures by airlines, fixed based operators, and tenants generate direct impacts, but only those that induce local business activity are relevant for a regional economic assessment. For this reason, it is important to distinguish between (a) the local value-added component of expenditures and (b) the regional import component. Thus, airline expenditures on fuel generate local fuel storage and distribution services and the importation of fuel into the region. In most parts of the country, only the former component is relevant for the analysis.

Similar considerations apply to the expenditures of gift shops, restaurants, and other airport businesses that purchase regional imports for resale. They may apply as well to airport construction and capital improvements.

Indirect impacts derive primarily from off-site economic activities that are attributable to the airport. These activities include services provided by travel agencies, hotels, restaurants, and retail establishments. These enterprises, like airport businesses, employ labor, purchase locally produced goods and services, and invest in capital expansion and improvements. Indirect impacts differ from direct impacts in that they originate

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Air Carrier Airports with More than Four Million Commercial Passengers per Year

Step 1. Determine employment at the airport.

If total airport employment is known, the analyst may proceed to Step 2. If airport employment is not known, it can be estimated by the following rule:

> For every 10,000 annual commercial passengers, including through passengers, the airport has approximately 8.8 employees. The uncertainty associated with this statistically derived coefficient (See Appendix A) can be indicated by a plus-and-minus 20 percent interval, with lower and upper limits of 7.0 and 10.6, respectively. For example, an airport with 10 million commercial passengers a year would have approximately 8,800 employees, with the actual employment almost certainly falling in the interval of from 7,000 to 10,600.

Note that this estimate does not include any large aircraft manufacturing or maintenance activity that may account for substantial additional employment at certain airports. These are addressed in step 3.

Step 2. Convert airport employment into airport payrolls.

A review of airport impact studies indicates that annual airport payroll per employee at high activity air carrier airports is approximately $27,000 (in 1984 dollars). To continue the example started in Step 1, the airport's estimated payroll would then be 8,800 times $27,000, or $237,600,000. The lower and upper limits would be $189,000,000 and $286,200,000.

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Step 5. Calculate total economic impacts.

The total impacts can then be estimated by summing the direct and induced employment and payroll impacts. In the example, 1,260 jobs would be attributed to the airport, with limits of 1,005 and 1,515. In addition, the airport would be credited with adding incomes totalling $27,720,000 to the region, with lower and upper limits of $22,110,000 and $33,330,000.

The discussion of the interpretation of rule-of-thumb estimates for high activity airports also applies here. The caveats regarding the noninclusion of airport expenditures and indirect impacts apply here as well.

General Aviation Airports

At an airport where the principal use is by general aviation, the five steps outlined above should be followed. In Step 1, employment and payroll data may be available from the airport manager. The scant data on GA airports suggests a rough ratio of one employee -for every 7.2 based aircraft,[1] but this may

[1] From data on fixed base operators by employment-size class, reported in the 1980 Survey of Airport Services (24), median FBO employment, including the FBO manager, is 4.5 for the nation as a whole. The average number of FBO's 'per airport is 1.1. Average FBO employment at an airport is thus 1.1 times 4.5, or approximately 5.0. The average number of permanently based aircraft per airport is 36.2. This figure divided by the average airport FBO employment of 5.0 yields a ratio of 7.2 based aircraft per FBO employee.

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Step 5. Calculate total economic impacts.

The total impacts can then be estimated by summing the direct and induced employment and payroll impacts. In the example, 1,260 jobs would be attributed to the airport, with limits of 1,005 and 1,515. In addition, the airport would be credited with adding incomes totalling $27,720,000 to the region, with lower and upper limits of $22,110,000 and $33,330,000.

The discussion of the interpretation of rule-of-thumb estimates for high activity airports also applies here. The caveats regarding the noninclusion of airport expenditures and indirect impacts apply here as well.

General Aviation Airports

At an airport where the principal use is by general aviation, the five steps outlined above should be followed. In Step 1, employment and payroll data may be available from the airport manager. The scant data on GA airports suggests a rough ratio of one employee -for every 7.2 based aircraft,[1] but this may

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tasks can often be carried out simultaneously or in some other order. Because of the relative complexity of the process and the extensive research and data collection that may be required, an individual or a small organization may not have the necessary expertise and resources to carry out a detailed assessment, and professional assistance may be required.

Phase 1. Preliminary Planning

The planning phase of the assessment is critical, because it articulates the purpose and thus defines the orientation of the research effort. The planning phase also identifies the resources to be employed in carrying out the project. Phase 1 includes the following tasks:

Stating the Purpose of the Assessment

A statement of the purpose of the project will typically reflect some actual or perceived requirement. This could be a regulatory mandate related to airport development planning, or it might be a need to document an airport's economic contribution to an area to gain financial and/or political support for the facility.

The statement of purpose should indicate the target audience, e.g., state aviation officials, state and local elected officials, or the general public. If more than one audience is anticipated, it may be appropriate to publish the report in more than one format.

Formulating the Research Questions

The planning phase should specify the kinds of information, both general and specific, to be included in the final report. This information should include estimates of direct, indirect, induced, and total impacts. An examination of some prior

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The direct impacts selected for quantification should then be linked with specific impact measures. The principal measures of on-site direct impacts are airport employment, airport payrolls, and expenditures for capital construction. Measures of off-site direct impacts include airport expenditures for materials, equipment, fuel, and utilities.

Airport businesses can be cited as promising sources of data for estimating direct impacts. These businesses include the airport's airlines, concessions, fixed base operators, air cargo operators, other tenants, and aviation-related businesses. If project resources permit, personal interviews should be specified as the means of collecting data. Personal interviews are preferable to mailed questionnaires, because they ensure that each question is understood and answered completely and unambiguously.

Although the survey probably should be tailor-made to accommodate the unique characteristics of the airport being studied, the study plan should provide for the study of questionnaires that have been used in other airport impact assessments. (These are often presented in appendices of reports.)

The following kinds of information regarding each airport tenant are likely to be useful in subsequent analysis, and these should be specified:

1. Type of business (airline, rental car agency, restaurant, gift shop, fixed base operator, air freight operator, etc.)

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1. Type of business (airline, rental car agency, restaurant, gift shop, fixed base operator, air freight operator, etc.)

Travel agency data should be collected directly by interview or a mailed questionnaire. If the region has a large number of travel agencies, a sample survey should be considered. The kind of information to be obtained is essentially the same as that collected from airport tenants, i.e., data on employment, payrolls, and expenditures. It is particularly important that the agencies estimate the percentage of their business that is related to local use of the airport.

Data on local expenditures of tourists and other visitors to the area who arrive at the airport can be estimated by a survey of hotels and travel agencies or obtained by an air passenger survey. Prior to the survey, a meeting should be held with airport management to gain its cooperation and to plan a sampling procedure that will not interfere with airport operations.

Information to be requested from departing non-local passengers should include the following:

1. Principal purpose of visiting the area (business, convention, vacation, etc.)

2. The number of trips to the airport in the past year

3. The number of days spent in the area

4. The approximate sums of money spent locally on lodging, food and beverages, gifts, entertainment, transportation, etc.

The questionnaire used in the study of the Harrisburg International Airport is presented in Appendix E. These sample data are then the basis for extrapolating total annual expenditures by tourists and other visitors to the area. The expenditure patterns of hotels, restaurants, and other enterprises that cater to visitors do not have to be determined unless, as

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Each set of RIMS II multipliers includes three tables: an employment multiplier table, a total earnings multiplier table, and a total multiplier table. In addition, BEA will provide a household direct coefficient table upon request. The total earnings multipliers are the most relevant for the economic impact assessment. They can be applied to either a general category of expenditures, e.g., airline expenditures, or to specific expenditure items, e.g., airline expenditures on up to 39 separate classifications of items, e.g., fuel and maintenance and repair. More refined estimates of multiplier effects can be obtained by applying separate multipliers to individual expenditure components.

RIMS II multipliers can thus be used to estimate the airport's total impact on employment and income, both for the region as a whole and, if desired, for specific industries within the region. It should be noted that the application of the RIMS II multipliers leads directly to total impacts and does not identify induced impacts explicitly. These, however, can be calculated by simply subtracting direct and indirect impacts from the total. An example of the use of RIMS II multipliers is presented in Appendix F.

Impacts of Increased Activity

If one of the objectives of the study is to estimate the economic impacts of future planned or anticipated changes in the use of the airport, provision must be made to forecast shifts in passenger demand. An airport's economic impacts, like its benefits, can be expected to change over time as airport activity changes. Economic impacts can be projected into the future by using the estimated relationship between airport employment and the number of commercial passengers shown in Figures A-1 and A-2 in Appendix A. However, an adjustment should be made to reflect productivity improvements that are expected in the economy. Productivity increases on the order

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CHAPTER 4

SUMMARY

Analytical techniques are available to quantify the transportation benefits and the economic impacts of airports. Rules of thumb, consistent with those analytical techniques, can provide preliminary but imprecise estimates by relating 'airport activity to benefits and to economic impact in terms of the jobs and payroll that result from the airport. Table 4-1 illustrates typical figures for airports with various activity levels.

These analytical techniques can also be used to predict the positive economic effects that are likely to result from increased aeronautical activity. For instance, if an airport with fewer than four million commercial passengers per year is forecast to have 50 additional based aircraft and 50,000 additional annual commercial passengers 10 years in the future, then it can be expected that there will be an accompanying increase in benefits of about $1,284,165 per year, and 74 jobs will be added to the local economy with a payroll impact of $1,617,000 per year.

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TABLE A-1

Airport Employment and Commercial Passengers for Airports with Fewer than Four Million Passengers a Year, 1981

AIRPORT	EMPLOYMENT	PASSENGERS (Millions)
EAST FARMDALE REPUBLIC	343	0.004
SANTA ANA JOHN WAYNE	1725	2.286
LIHUE	57	2.212
AUSTIN MUELLER	718	1.784
HOUSTON HOBBY	1743	3.269
BURBANK-GLENDALE-PASADENA	2345	1.917
RALEIGH-DURHAM	1250	1.774
CHARLOTTE	1592	3.111
SACRAMENTO	889	2.267
GREENSBORO/HIGH POINT/W-S	824	1.41
SAN JOSE	1480	2.877
ALBUQUERQUE INTERNATIONAL	612	2.296
CHARLESTON INTERNATIONAL	320	0.947
CEDAR RAPIDS	307	0.56
PALM BEACH INTERNATIONAL	1532	2.583
ASHEVILLE	194	0.345
SAN ANTONIO	3705	3.209
PORTLAND (OR)	2464	3.871
DATONA B E A C H	467	0.768
ALLENTOWN-BETHLEHEM-EASTON	752	0.588
MOLINE QUAD CITY (IL)	501	0.587
FORT MYERS LEE COUNTY	506	1.128
INDIANAPOLIS INTERNATIONAL	3157	3.091
RENO CANNON INTERNATIONAL	983	2.502
SYRACUSE HANCOCK	838	1.663
EL PASO INTERNATIONAL	1444	1.913
BATON ROUGE RYAN	351	0.536
COLUMBUS	2500	2.541
GREENVILLE-SPARTANBURG	522	0.667
NASHVILLE	2267	2.517
MILWAUKEE MITCHELL	1260	3.296
FREELAND TRI-CITY (MI)	243	0.394
LEXINGTON BLUE GRASS	411	0.641
FORT WAYNE BAER	473	0.494
LOUISVILLE STANDIFORD (KY)	1902	2.046
CINCINNATI INTERNATIONAL	2895	2.84
ONTARIO (CA)	2979	2.36
BALTIMORE-WASHINGTON INTERN	3023	3.764
WICHITA MID-CONTINENT	1866	1.159
DAYTON INTERNATIONAL	1201	1.816
RICHMOND BYRD	1194	1.227
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TABLE A-2

Airport Employment and Commercial Passengers for Airports with More than Four Million Passengers a Year, 1981

AIRPORT	EMPLOYMENT	PASSENGERS (Millions)
CHICAGO-O'HARE	24727	43.653
HONOLULU	8000	14.036
LOS ANGELES	46971	33.038
LA GUARDIA	8419	17.459
NATIONAL	7216	14.538
DALLAS-FT.WORTH	14253	21.951
ATLANTA-HARTSFIELD	30000	40.148
SAN FRANCISCO	29260	22.248
HOUSTON INT.	10000	10.695
MIAMI	31583	20.505
DENVER-STAPLETON	12400	20.849
LAS VEGAS MCCARRAN	2751	9.929
PITTSBURGH	5901	11.453
SAN DIEGO-LINDBERGH	4750	5.165
FORT LAUDERDALE	3181	6.025
KENNEDY	32287	26.796
TAMPA INT.	3842	7.689
MINNEAPOLIS-ST. PAUL	15528	9.024
DETROIT METRO	4000	9.759
SEATTLE--TACOMA	16900	9.194
CLEVELAND	4553	6.123
PHOENIX-SKY HARBOR	10600	6.586
ORLANDO	1603	6.532
NEWARK	5824	9.223
SALT LAKE CITY	2760	4.244
KANSAS CITY INT.	10000	5.306
MEMPHIS	7331	5.216

Source: Airport Operators Council International

TABLE A-2

Airport Employment and Commercial Passengers for Airports with More than Four Million Passengers a Year, 1981

AIRPORT	EMPLOYMENT	PASSENGERS (Millions)
CHICAGO-O'HARE	24727	43.653
HONOLULU	8000	14.036
LOS ANGELES	46971	33.038
LA GUARDIA	8419	17.459
NATIONAL	7216	14.538
DALLAS-FT.WORTH	14253	21.951
ATLANTA-HARTSFIELD	30000	40.148
SAN FRANCISCO	29260	22.248
HOUSTON INT.	10000	10.695
MIAMI	31583	20.505
DENVER-STAPLETON	12400	20.849
LAS VEGAS MCCARRAN	2751	9.929
PITTSBURGH	5901	11.453
SAN DIEGO-LINDBERGH	4750	5.165
FORT LAUDERDALE	3181	6.025
KENNEDY	32287	26.796
TAMPA INT.	3842	7.689
MINNEAPOLIS-ST. PAUL	15528	9.024
DETROIT METRO	4000	9.759
SEATTLE--TACOMA	16900	9.194
CLEVELAND	4553	6.123
PHOENIX-SKY HARBOR	10600	6.586
ORLANDO	1603	6.532
NEWARK	5824	9.223
SALT LAKE CITY	2760	4.244
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Source: Airport Operators Council International

APPENDIX B

FAA REGIONAL OFFICES

NEW ENGLAND REGION

Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut

Regional Office: Airports Division, ANE-600
Federal Aviation Administration
12 New England Executive Park
Burlington, Massachusetts 01803

Comm. Telephone: 617-273-7044

EASTERN REGION

New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, and District of Columbia

Regional Office: Airports Division, AEA-600
Federal Aviation Administration
Fitzgerald Federal Building, Room 329
John F. Kennedy International Airport
Jamaica, New York 11430

Comm. Telephone: 718-917-1239

SOUTHERN REGION

Georgia, North Carolina, South Carolina, Florida, Puerto Rico, Virgin Islands, Tennessee, Kentucky, Mississippi, and Alabama

Regional Office: Airports Division, ASO-600
Federal Aviation Administration
3400 Norman Berry Drive
East Point, Georgia 30344

Comm. Telephone: 404-763-7288

Mail: Airports Division, ASO-600
Federal Aviation Administration
P.O. Box 20636
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APPENDIX C

STATE AVIATION AGENCIES

Alabama

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Alabama Dept. of Aeronautics
817 South Court Street
Montgomery, AL 36130-0101
Telephone: 205 + 261-4480

Alaska

Director
Central Reg. Planning
Dept. of Transportation &
Pub. Facs.
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Anchorage, AK 99502
Telephone: 907 + 266-1462

Arizona

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Arkansas Dept. of Aeronautics
Adams Field-Old Terminal Bldg.
Little Rock, AR 72202
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Division of Aeronautics - DOT
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Sacramento, CA 95814
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Colorado

Airport Planning Staff
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Delaware

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National Association of State Aviation Officials Suite 717 7771 4th Street, NW Washington, DC 20005	Exec. Vice President Robert T. Warner	202-783-0588
National Business Aircraft Association, Inc. 1200 Eighteenth Street, NW Washington, DC 20036	President John H. Winant	202-783-9000
Regional Airline Association Suite 700 1101 Constitution Avenue, NW Washington, DC 20036	President Duane Ekedahl	202-857-1170

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Regional Airline Association Suite 700 1101 Constitution Avenue, NW Washington, DC 20036	President Duane Ekedahl	202-857-1170

B. EXPENDITURES

6. How much did your organization spend in the Harrisburg Area during the past year on the following items:

a. Materials and Equipment . . $ _____

b. Vehicle Fuel . . . . . $ _____

c. Aviation Fuel . . . . . $ _____

d. Other (specify)

_____ . . . . . $ _____

_____ . . . . . $ _____

_____ . . . . . $ _____

7. How much did your organization spend in the Harrisburg Area during the past year on the following support services:

a. Maintenance and repair . . . $ _____

b. Advertising . . . . . $ _____

c. Electricity . . . . . $ _____

d. Natural Gas . . . . . $ _____

e. Telephone . . . . . $ _____

f. Other (specify)

_____ . . . . . $ _____

_____ . . . . . $ _____

_____ . . . . . $ _____

8. How much did your company pay in 1982 for each of the following taxes?

a. Pennsylvania State sales and use taxes on goods purchased from off-airport firms . . . . . $ _____

b. All other Pennsylvania State taxes . . . . . $ _____

c. Aviation Fuel tax . . . . . $ _____

d. Vehicle Fuel tax . . . . . $ _____

e. Other Community taxes (specify)

_____ . . . . . $ _____

_____ . . . . . $ _____

_____ . . . . . $ _____

_____ . . . . . $ _____

C. REVENUE AND CAPITAL COSTS

9. What was the gross revenue earned by your company from business at HIA during 1982?

$ _____

10. How much did your company spend during the year (1982) on capital improvements at HIA (i.e., major purchase of equipment or major development projects)?

$ _____

11. How much does your organization plan to spend on capital improvements to your exclusive facilities at HIA:

a. During 1983? . . . . . $ _____

b. During the 1984 to 1988 period? . . . . . $ _____

c. During the 1989 to 1993 period? . . . . . $ _____

☐ Please check this box if you would like a copy of the brochure resulting from this study, and provide a mailing address below. (If you prefer not identifying your company on this questionnaire, simply send us a separate letter requesting a copy of the brochure.)

_____

_____

_____

If there is any other information which we can provide you, please feel free to indicate your questions or data needs.

_____

_____

_____

If you have any additional information which you would like to provide, please send it to:

Malcolm H. Klein
Aviation Planning Associates, Inc.
421 Arch Street
Cincinnati, Ohio 45202

Thank you for your cooperation!

B. EXPENDITURES

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b. Vehicle Fuel . . . . . $ _____

c. Aviation Fuel . . . . . $ _____

d. Other (specify)

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_____ . . . . . $ _____

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e. Telephone . . . . . $ _____

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d. Vehicle Fuel tax . . . . . $ _____

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II. TOTAL METROPOLITAN IMPACT:

The information obtained in this section will be used to estimate the economic benefit of Harrisburg International Airport (HIA) to the Harrisburg Area.

A. EMPLOYMENT AND PAYROLL

2. How many full-time and part-time employees did your organization have directly at HIA?

Full-time _____

Part-time _____

3. What was the total 1982 payroll of your organization's employees located directly at HIA?

Full-time $ _____

Part-time $ _____

B. EXPENDITURES

4. What were your estimated expenditures during 1982 for materials and equipment (e.g., off ice supplies, furniture, vehicles, etc.) purchased in the Harrisburg Metropolitan Area? . . . . . $_____

5. What were your estimated expenditures during 1982 for services performed by other companies (e.g., utilities, dry cleaning, advertising) located in the Harrisburg Metropolitan Area? . . . $_____

6. Have you completed, or are you in the process of completing, any major expansion or renovation projects at your facilities at HIA?

1. ☐ No 2. ☐ Yes

7. **If YES, approximately how much did you spend on these projects? (Give total if more than one project.) . . . . $_____**

8. How much does your organization plan to spend on capital improvements to your exclusive facilities at HIA:

a. During 1983? . . . . . $_____

b. During the 1984 to 1988 period? . . . . . $_____

c. During the 1989 to 1993 period? . . . . . $_____

C. TAXES

9. Approximately how much did your company pay in state and local taxes during 1982?

State taxes paid $ _____

Local taxes paid $ _____

III. LOCATION

10. How important was the proximity to the Airport in your choice to locate at HIA?

1. ☐ Essential
2. ☐ Important
3. ☐ Not Important

11. What other factors were important in your choice to locate at HIA?

_____

_____

_____

☐ Please check this box if you would like a copy of the brochure resulting from this study, and provide a mailing **address** below. (If you prefer not identifying your company on this questionnaire, simply send us a separate letter requesting a copy of the brochure.)

_____

_____

_____

_____

If there is any other information which we can provide you, please feel free to indicate your questions or data needs.

_____

_____

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_____

If you have any additional information which you would like to provide, please send it to:

Malcolm H. Klein
Aviation Planning Associates, Inc.
421 Arch Street
Cincinnati, Ohio 45202

Thank you for your cooperation!

II. TOTAL METROPOLITAN IMPACT:

The information obtained in this section will be used to estimate the economic benefit of Harrisburg International Airport (HIA) to the Harrisburg Area.

A. EMPLOYMENT AND PAYROLL

2. How many full-time and part-time employees did your organization have directly at HIA?

Full-time _____

Part-time _____

3. What was the total 1982 payroll of your organization's employees located directly at HIA?

Full-time $ _____

Part-time $ _____

B. EXPENDITURES

4. What were your estimated expenditures during 1982 for materials and equipment (e.g., off ice supplies, furniture, vehicles, etc.) purchased in the Harrisburg Metropolitan Area? . . . . . $_____

5. What were your estimated expenditures during 1982 for services performed by other companies (e.g., utilities, dry cleaning, advertising) located in the Harrisburg Metropolitan Area? . . . $_____

6. Have you completed, or are you in the process of completing, any major expansion or renovation projects at your facilities at HIA?

1. ☐ No 2. ☐ Yes

7. **If YES, approximately how much did you spend on these projects? (Give total if more than one project.) . . . . $_____**

8. How much does your organization plan to spend on capital improvements to your exclusive facilities at HIA:

a. During 1983? . . . . . $_____

b. During the 1984 to 1988 period? . . . . . $_____

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C. TAXES

9. Approximately how much did your company pay in state and local taxes during 1982?

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1. ☐ Essential
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3. ☐ Not Important

11. What other factors were important in your choice to locate at HIA?

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Thank you for your cooperation!

9. What was the Zip Code of this place?

_____

(If zip code is not known, list the approximate address or building name, and city name.)

_____

_____

10. What was the approximate travel time from the point where you started your ground trip to the Airport, until you entered the terminal to board this flight?

_____ hours _____ minutes

11. What was your principal mode of travel to the Airport today?

1. ☐ Private Auto
2. ☐ Taxi
3. ☐ Rental Car
4. ☐ Hotel/Motel Courtesy Van
5. ☐ Limousine Service
6. ☐ Air Taxi
7. ☐ Other _____
(Please Specify)

12. If a public bus service had been available, would you have taken a bus to come to the Airport today?

1. ☐ No 2. ☐ Yes

13. The Department of Transportation is considering the development of a commuter train service between downtown Harrisburg and the Airport. If this service had been available, would you have used the train to come to the Airport today?

1. ☐ No 2. ☐ Yes

III. FINALLY SOME INFORMATION ABOUT YOU. PLEASE BE ASSURED THAT YOUR ANSWERS TO THE FOLLOWING QUESTIONS WILL BE USED FOR STATISTICAL PURPOSES ONLY.

14. During the past 12 months, considering all flights to all destinations, how many total air round trips have you made prior to this trip?

_____ Total number of round trips

15. Are you a resident of the Harrisburg area or any of the nearby counties listed below? (Please check that county of which you are a resident. If you are not a resident of any of these counties, check the box provided).

1. ☐ Dauphin County, Pennsylvania
2. ☐ Lebanon County, Pennsylvania
3. ☐ Lancaster County, Pennsylvania
4. ☐ York County, Pennsylvania
5. ☐ Adams County, Pennsylvania
6. ☐ Franklin County, Pennsylvania
7. ☐ Cumberland County, Pennsylvania
8. ☐ Perry County, Pennsylvania
9. ☐ Not a resident of the above counties

IF YOUR PERMANENT RESIDENCE IS IN ONE OF THE EIGHT COUNTIES LISTED ABOVE, PLEASE SKIP TO QUESTION 21.

16. How many trips by air have you made to Harrisburg, not including connections, in the past 12 months? (Count a round trip as one.) _____

17. How many days did you spend in the Harrisburg area or suburbs during this trip? _____

18. Approximately how much money did you spend on each of the following items during your stay in Harrisburg. (If traveling with another individual, please record only those expenditures which you yourself made.)

Hotel/Motel Lodging .....$_____

Food and Beverages .....$_____

Retail Stores .....$_____

Sports, Nightclubs and Other Entertainment .....$_____

Local Transportation, including Rental Car .....$_____

Business-related Goods and Services .....$_____

Other .....$_____

Total Expenditures .....$_____

19. What major places of business, entertainment, or recreation did you visit during this trip to Harrisburg?

_____

_____

_____

20. The future development plan for Harrisburg International Airport may identify the need for a hotel/conference center at the Airport. If the hotel/conference center had been available during your visit to Harrisburg, check the statement that best describes your situation:

1. ☐ I would have considered staying at the hotel center
2. ☐ I would have considered using the conference facilities to host a business meeting of product demonstration
3. ☐ Both situations 1 and 2 above
4. ☐ Not sure if I would have considered the hotel/conference center in making my plans for this trip.
5. ☐ I would not have considered using the hotel/conference center because

_____

_____

21. The space below is for your comments relating to Harrisburg International Airport and how we can improve service to the air passenger.

_____

_____

_____

_____

9. What was the Zip Code of this place?

_____

(If zip code is not known, list the approximate address or building name, and city name.)

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10. What was the approximate travel time from the point where you started your ground trip to the Airport, until you entered the terminal to board this flight?

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Business-related Goods and Services .....$_____

Other .....$_____

Total Expenditures .....$_____

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_____

_____

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to determine sales of a particular regional industry when airport expenditures are the only available information.

Each aviation business related to a targeted airport is assigned a Standard Industrial Classification code. The aviation-related business is identified with a corresponding RIMS II code number, Table F-l presents business activities that are most likely encountered in aviation-related economic studies. These activities can be matched with corresponding RIMS II code numbers. The RIMS II code number will identify the specific multiplier factor to be applied to the affected business.

The RIMS II model uses sales by aviation businesses to estimate the final demand at targeted airports. Business activities are evaluated and defined according to their level of economic consequences to the targeted airport. These activities are grouped into direct and indirect impacts. Business information gathered at each airport includes:

1. magnitude of sales
2. size of purchase
3. identity of purchase
4. number of employees
5. size of payroll

In general, sales should be multiplied by RIMS II multipliers to determine economic impacts. However, if data are lacking for some specific types of business activity, other information, such as expenditures, payroll earnings and number of employees can be used. The following calculations illustrate the RIMS II methods of computing economic impacts from data on airport sales, payroll and employment.

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